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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/510,519

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EXAMINER

HALPERN, MARK

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

01/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/510,519	Applicant(s) GIROLD ET AL.	
	Examiner Mark Halpern	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 12-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>12/3/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

- 1) Acknowledgement is made of Amendment received 12/3/2007. Claims 1, 12 are amended and claim 11 is cancelled.

Information Disclosure Statement

- 2) The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Prior art references recited in the Specification [0008], [0015] are not listed on form PTO-1449 and copies of the foreign references are not submitted for verification.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

- 3) Claims 1-6, 12-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter

which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1, in lines 3-4, recites "...at least one oxygen plasma torch on an upper part of the crucible and at least one inductor winding outside the crucible, the oxygen plasma torch configured to create an oxidizing atmosphere in the furnace, ...". The phrase "oxygen plasma torch" is new matter not disclosed in the original specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4) Claims 1-6, 12-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, in lines 3-4, recites "...at least one oxygen plasma torch on an upper part of the crucible and at least one inductor winding outside the crucible, the oxygen plasma torch configured to create an oxidizing atmosphere in the furnace, ...". The phrase "oxygen plasma torch" is not clear since it is not disclosed in the original specification.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5) Claims 1, 3-6, 12-14, are rejected under 35 U.S.C. 103(a) as being unpatentable over Gotovchikov (5,750,822), with or without FR 96 09382.

Claim 1: Gotovchikov discloses a vitrification furnace 10 that includes a crucible 26 and heating means, the heating means including at least one plasma torch 18 in an upper portion of the crucible (col. 4, lines 30-35), and at least one induction coil 34 located outside said crucible (col. 5, lines 6-29)(col. 4 line 13 to col. 5, line 51 and Figures 1-5). Gotovchikov discloses that the plasma torch is designed to fire oxygen, therefore it reads on the claimed oxygen plasma torch (col. 3, lines 1-23). Gotovchikov does not disclose that the induction coil 34 is located under the crucible, however, it would have been obvious to one skilled in the art at the time the invention was made, that the location of the induction coil could be located under the crucible, since the induction coil of Gotovchikov performs the same function as that of the induction coil of the present invention. If need be, FR 96 09382, as self admitted in [0015] of the present Specification, discloses induction coil location under the crucible. It would have been obvious to combine the teachings of Gotovchikov and FR 96 09382, because such a combination would improve the quality of vitrification in the crucible of Gotovchikov.

Claims 3-6: plasma torch assembly includes more than one torch. The torch settings are disclosed.

Claims 12-14 recite method limitations that do not structurally differentiate the apparatus claims over the cited prior art.

6) Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gotovchikov with or without FR 96 09382, in view of Boen (WO 98/05185). The crucible plate and a shell upright structure is well known in the art, as for example, shown by Boen in Figure 1.

Response to Amendment

7) Prior art references recited in the Specification [0008], [0015] are not listed on form PTO-1449 and copies of the foreign references are not submitted for verification.

8) Applicant's arguments filed 12/3/2007, have been fully considered but they are not persuasive.

Applicants allege that the cited prior art, Gotovchikov, does not disclose an oxygen plasma torch.

Gotovchikov discloses that the plasma torch is designed to fire oxygen, therefore it reads on the claimed oxygen plasma torch (col. 3, lines 1-23).

Applicants allege that Gotovchikov does not disclose oxygen in plasma state.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., oxygen in plasma state) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are

not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

9) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone no. is 571-272-1190.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Mark Halpern/
Primary Examiner
Art Unit 1791